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Over the Horizon – Health and Safety Evolving

**Celebrating the Partnership for Innovative Practitioner
Engagement in Research (PIPER)**

30th November 2016
Maeve O'Loughlin

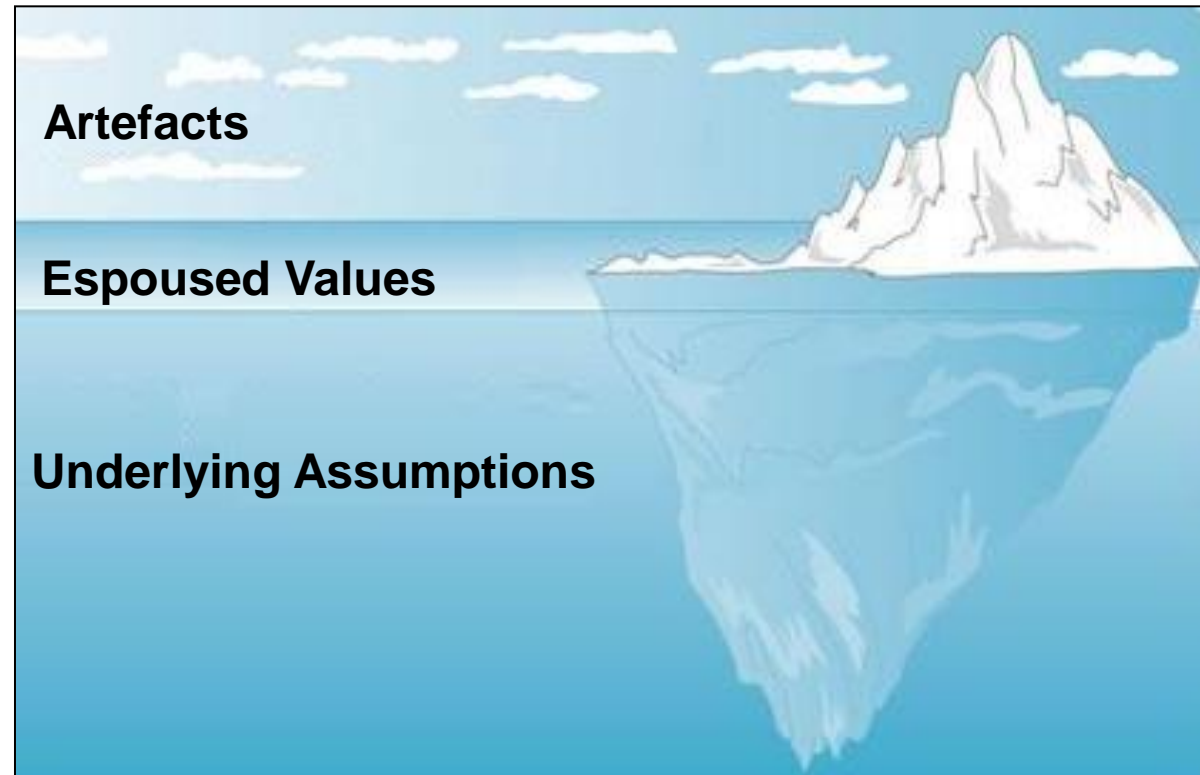
Questioning the assumptions of Health and Safety Practice through research

In 2012, Besnard and Hollnagel challenged stakeholders of health and safety to consider reflection of the paradoxes, assumptions and myths underpinning our practice

The purpose of this brief seminar is for us to consider the assumptions and myths and to consider the role academic research can have to address these in practice

Are assumptions are important?

- **Visible & Tangible** →
- **Statements written or said** →
- **Hidden & taken for granted** →

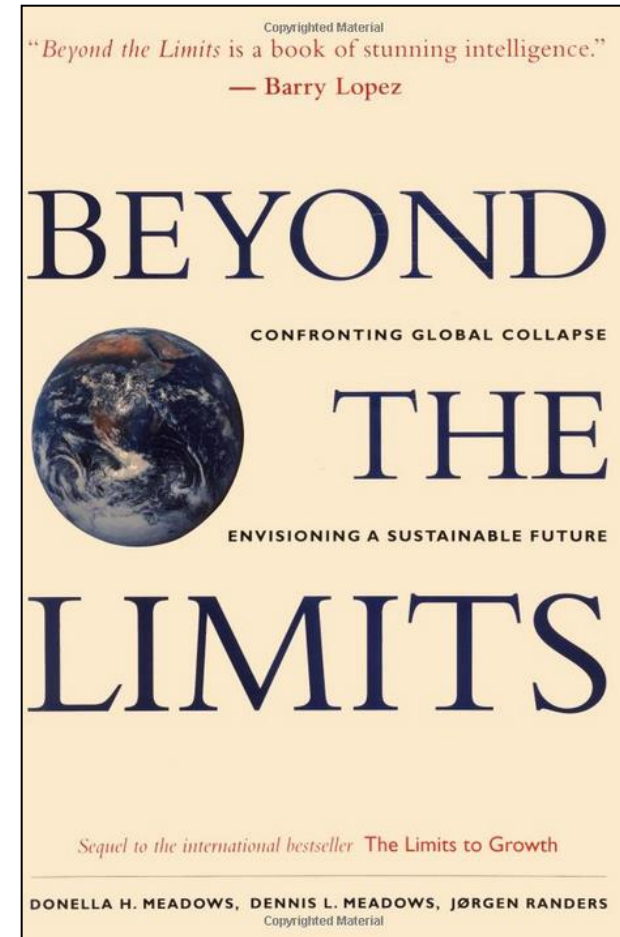


The effect of assumptions

Lag of 11 years in discovery of Antarctic ozone hole

“The news reverberated around the scientific world. Scientists [at NASA] scrambled to check readings on atmospheric ozone made by the Nimbus 7 satellite, measurements that had been taken routinely since 1978. Nimbus 7 had never indicated an ozone hole.

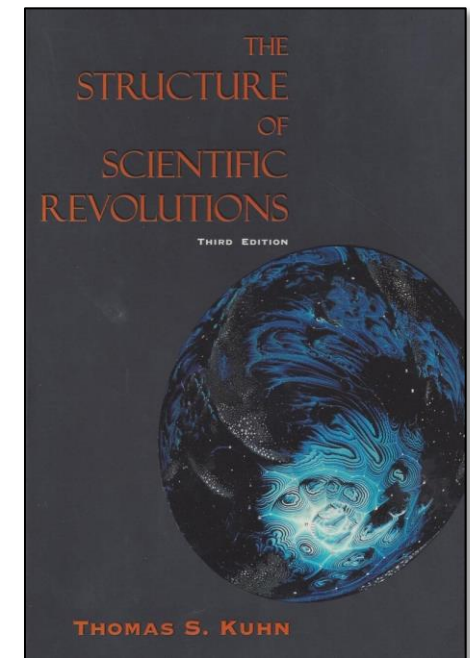
Checking back, NASA scientists found that their computers had been programmed to reject very low ozone readings on the assumption that such low readings must indicate instrument error”



The question posed today is....

Are assumptions in health and safety practice based on myth rather than evidence?

“A scientific paradigm suppresses the perception of data inconsistent with the paradigm, making it hard to perceive anomalies that might lead to scientific revolution.”



The paradox of our definition of safety

Safety is a dynamic non-event (Weick, 1991) defined by its absence not its presence.

“You can’t manage what you can’t measure!”

Look at negatives (occasional) to plan for positives (invisible)

Focus at component level which can ignore the system view and also sources of resilience.

But accident rates are plateauing so are we now safe or have we lost our navigational aids?

What about other positive face of safety?

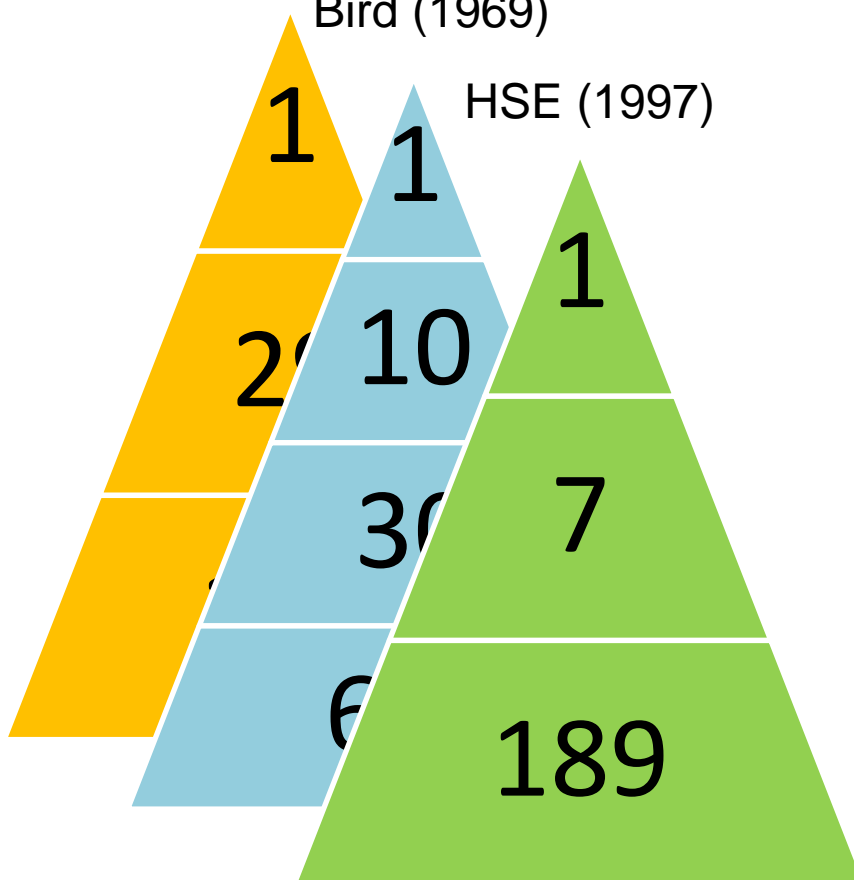


Assumptions about accident causation

Heinrich (1931)

Bird (1969)

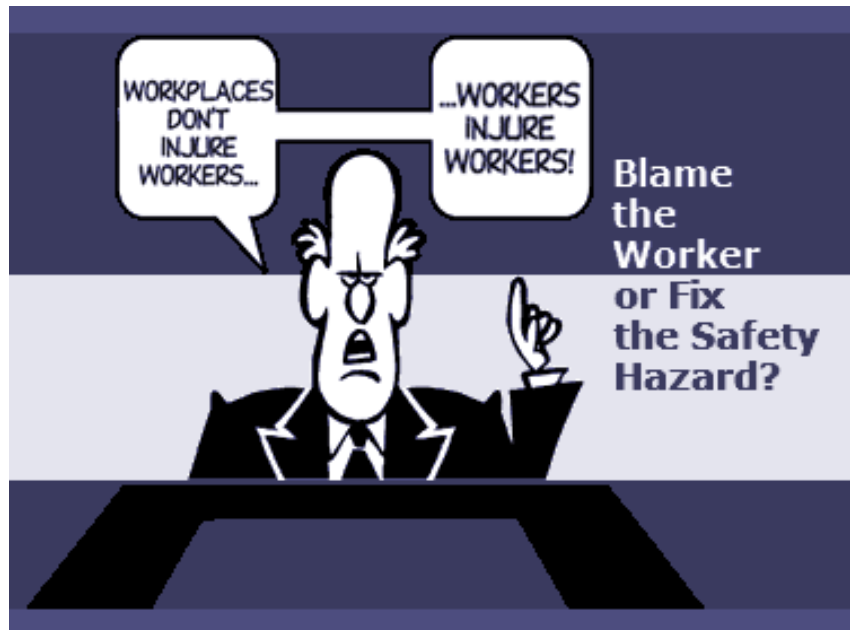
HSE (1997)



What this theory related to...

- Insurance claims data – majors as cases reported, minors as first aid cases, no injury as unplanned events
- Unsafe acts of workers identified as principal causes of accidents (88% acts 10% mechanical and unpreventable 2%!)
- No original research data available from Heinrich's study

This has resulted in assumptions about how to control risk...



“Even in a no-blame culture, everyone wants to know a name”

- Reducing all minor issues will reduce serious accidents → **False sense of security through action and misplaced use of resources bureaucratically.**
- Accidents are caused by violation of workers actions from standard practice, rules, procedures → **A focus on blame and behaviour as the primary fix. Faith in the system.**
- Investigations which fail to recognise management decisions, culture, competing objectives, trade-offs....

Have these posed problems to practice?



Are we focusing on the right things?

Are our systems fit for purpose?

Do we need more defences or do we do things differently?

Does 'more' mean effective or more bureaucratic means?



- Resilience Engineering – Hollnagel, Woods
- Just Culture, Safety Differently – Dekker
- High Reliability Organising – Weick

The role and treatment of workers is central. Adaptive capacity is critical. Take a systems approach to consider accident causation. Recognise trade-offs and sacrificing decisions required from a strategic perspective. Recognise the gap between work as imagined and work as done.

**Organisational Research can help
support investigating how best to do this.**

What is PIPER?

- Partnership between IOSH London Branch and London Universities (Middlesex & Greenwich)
- It aims to support IOSH members address real life issues, challenges or areas of OHS practice.
- Embeds these issues to a research strategy for MSc researchers
- Academically supported by practitioners and senior academic researchers with greater outcomes of success.

How research can help our profession.....

Policy making

Political ideology

Eg. “What I ‘think’ is right”,
“what they want”, “what it
can get us”



Evidence basis

E.g. “What the results
show”, “What can be seen”,
“what the experiences are”

Factors leading to rise in use of evidence in policy and practice

- Pressures towards proof of productivity & competitiveness of policy
- Knowledgeable & informed public demanding proof
- Declining trust in the professional expertise
- Greater scrutiny and accountability

In professional practice decision making without evidence can cause problems....

By GOBSAT (Good Old Boys Sat Around Tables)

– made by biased opinions which could consist of the bad habits & personal experiences of ageing professionals

By Anecdote – Decisions are based on personal experience

By Cost minimisation –

Decisions based on cheapest option

By Press cutting – Decisions are based on single studies without consideration given to the methods or the results of alternative studies

Research is important because...

- OHS is a multidisciplinary & applied practice
- It provides proof and can inform progress
- It helps validate decisions to be taken
- Its aim is to be objective
- It can be repeated to assess conditions over time
- Flexible enquiry methods can be used with rigour approached in various ways

The importance is in building knowledge and helps guide decision making at a given time using an appropriate rigorous method

- Over 20 projects successfully completed
 - Action Research with hands on support
 - Evaluation style research
 - Benchmarking
 - Application of new theory to inform practice
- Crossrail, Ipsen, BP, Mount Anvil, ISS, TFL and various others across industry sectors

- A new research programme will be kicked off on December 7th 6pm with a workshop
- MSc researchers, tutors and organisations invited to match skills and project ideas.

Victory Services Club – 6pm – 7th December

Come along with some ideas!